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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/688,965

10/21/2003

Toshiyuki Sasaki

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7425

22852

7590

07/25/2006

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EXAMINER

GEYER, SCOTT B

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/688,965	SASAKI ET AL.	
	Examiner	Art Unit	
	Scott Geyer	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8-24 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 23 and 24 is/are allowed.
- 6) ☒ Claim(s) 8,9,14,16,21 and 22 is/are rejected.
- 7) ☒ Claim(s) 10-13,15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>042006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1 and 8-24 are pending; claim 1 is withdrawn.

Information Disclosure Statement

The references cited within the IDS document submitted on April 20, 2006 have been considered.

Claim Rejections - 35 USC § 112

The amendments to claims 14 and 15 are acceptable; the rejections to claims 14 and 15 under 35 USC 112 are withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8, 9, 14, 16, 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (6,737,320 B2).

As to **claims 8, 9, 14, 16, 21 and 22**, Chen et al. teach a forming a first dielectric film 225 on a semiconductor substrate 215, forming a first electrode material 235 on the first dielectric film, forming a second dielectric film 240 having a thickness between 5 and 100 angstroms on the first electrode film, and forming a second electrode material 245 on the second dielectric layer. The second electrode and second dielectric material are etched using a pattern, and the resulting structure is a gate electrode. See figures 2-5. The first and second electrode materials are polysilicon and are doped with an impurity.

Allowable Subject Matter

Claims 10, 11, 15, 17 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. (Claims 12 and 13 are dependent upon claim 11; claims 18 and 19 are dependent upon claim 17.)

Claims 23 and 24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter. The prior art of record and to the examiner's knowledge does not teach or render obvious, at least to the skilled artisan, the instant invention regarding a method of making a semiconductor device comprising formation of first and second stack films on a dielectric film wherein each of the stack films includes a first electrode material layer, a dielectric film layer with a thickness of 5-100 angstroms, and a second electrode material layer, particularly characterized by an etching rate of the first and second

electrode materials of the first stack film having an etching rate different than that of the first and second electrode materials of the second stack film.

Response to Arguments

Applicant's arguments with respect to claims 8-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Geyer whose telephone number is (571) 272-1958. The examiner can normally be reached on weekdays, between 10:00am - 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SBG

July 18, 2006

SCOTT B. GEYER
PRIMARY EXAMINER

SBG 7/18/06